NOTES ON NEW AND LITTLE KNOWN AUSTRALIAN MADROPORACEÆ.

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Goniopora fruticosa, *sp. nov.*

Corallum subdendroid, forming small shrubby growths; the branches subdigitate, somewhat complanate, shortly furcate or palmate at their distal extremities; cœnenchyma highly porous and trabeculate; calicles uneven, very shallow, not exceeding 2 millimetres in diameter; septa representing 3 cycles, those of the primary cycle frequently developed centrally in a paliform manner and forming an irregular hexradiate star. Polypites highly extensile, with 24 elongate subulate tentacles; oral disk white, tentacles and column clear liver-brown. Height of coralla 6 – 8 centimetres, diameter of branches 1 centimetre.

Hab. Warrior Reef, Torres Straits. Co-type in the Australian Museum, Sydney.

This species differs from previously described members of the genus *Goniopora* in the subdendroid character of the corallum, and which in all other known types is massive or lobate. It was collected by the author at extreme low water on the reef in the neighbourhood of Tud or Warrior Island, Torres Straits.

Alveopora spongiosa, *Dana.*

This species first described by Dana, Zooph., p. 513, pl. xlviii., fig. 3, is referred by Milne Edwards and Haime to the *Alveopora viridis* of Quoy and Gaimard, but from which on reference to Quoy and Gaimard's original figures and description it is found to be essentially distinct. The last named species is represented by these authors as forming compound frondose or subdigitate expansions, and the polypites are green and brown. In Dana's type the coralla are represented by solid lobate masses and the polypites, as examined by the author, are clear brown throughout with white tips to the tentacles. A form corresponding with *Alveopora viridis* has been also obtained by the author in Torres Straits, and the corallites in the two species are found to differ essentially in the character of their component calicles. In

Alveopora viridis the upper margins of the walls of the calicles are relatively smooth and the rudimentary septal spines are slender and very deeply set. In *A. spongiosa*, on the contrary, the corresponding spines are short and thick and conspicuously developed near the calicinal orifice. Collected by the author in the neighbourhood of Thursday Island, Torres Straits.

TRIDACOPHYLLIA RECTIFOLIA, *sp. nov.*

Corallum exceedingly fragile, forming a subeven hemisphere; calicinal centres confined to the bottoms of the valleys, the external distal edges of the calicles even and uninterrupted, slightly perforate, not lacinulate; valleys 5 – 6 centimetres wide: septa forming 3 or 4 cycles, subeven, their edges very finely denticulate, the distal termini of the first to third cycles slightly excurrent and somewhat echinulate. Diameter of entire corallum 44 centimetres; height 18 centimetres.

Hab. New Hebrides.

The great depth of the calicinal valleys, their perpendicular walls and subeven non-lacinulate distal edges, distinguish this species from *Tridacophyllia lactuca*, which in other details it most nearly resembles. The magnificent specimen constituting the type of this species, and of which a reduced photographic representation is appended, is contained in the Australian Museum, Sydney.